



STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
12 Field Company Engineers
Sheikhupura Camp C/O
Signal Centre (FWO) Chaklala

Reference # CED/TFL 2227 (Dr. Rizwan Azam)
Reference of the request letter # 607/General/02/Project

Dated: 02-11-2022
Dated: 28-10-2022

Tension Test Report (Page – 1/1)

Date of Test 14-11-2022
Gauge length 2 inches
Description Bearing Pad Steel Plate Steel Strip Tensile Test

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	(mm)	(mm)	(mm ²)	(kg)	(kg)	(MPa)	(MPa)	(in)		
1	Bearing Pad Steel Plate	44.08x3.10	136.65	4900	6200	352	445	0.70	35.00	P-01
2		44.60x3.30	147.18	5000	6000	333	400	0.80	40.00	N-01
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-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only Two Samples for Tensile Test										
Bend Test										

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

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Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
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To,
 Deputy Project Manager
 United Lifestyle (Pvt) Ltd
 A High Rise Building “Skyscraper by United” at Johar Town, Lahore

Reference # CED/TFL **2269** (Dr. Rizwan Azam)
 Reference of the request letter # ULS/2021-22/009

Dated: 11-11-2022
 Dated: 10-11-2022

Tension Test Report (Page -1/1)

Date of Test 14-11-2022
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.399	3	0.386	0.11	0.117	4000	5500	80200	75220	110200	103500	1.20	15.0	
2	0.438	3	0.405	0.11	0.129	3900	5500	78200	66750	110200	94200	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
M/S Unirazz Services
Lahore
(Packages Real Estate (Pvt) Ltd.)

Reference # CED/TFL 2270 (Dr. Rizwan Azam)
Reference of the request letter # USPL/UET/4530

Dated: 11-11-2022
Dated: 11-11-2022

Tension Test Report (Page -1/1)

Date of Test 14-11-2022
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (mm)		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.374	10	9.50	0.12	0.110	3400	5000	62464	68250	91858	100400	1.20	15.0	Moiz Steel
2	0.372	10	9.47	0.12	0.109	3400	5000	62464	68600	91858	100900	1.50	18.8	
3	4.248	32	32.03	1.25	1.249	35400	55200	62434	62490	97355	97500	1.50	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only three samples for tensile and two samples for bend test														
Bend Test														
10mm Dia Bar Bend Test Through 180° is Satisfactory														
32mm Dia Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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Ref: CED/TFL/11/2272

Dated: 11-11-2022

Dated of Test: 14-11-2022

To

M/S Total Fire and Safety
Lahore

Subject: - **CALIBRATION OF PRESSURE GAUGE (MARK: TFL/11/2272)** (Page # 1/1)

Reference to your Letter No. Nil, Dated: 11/11/2022 on the subject cited above. One Pressure Gauge as received by us has been calibrated. The results are tabulated as under:

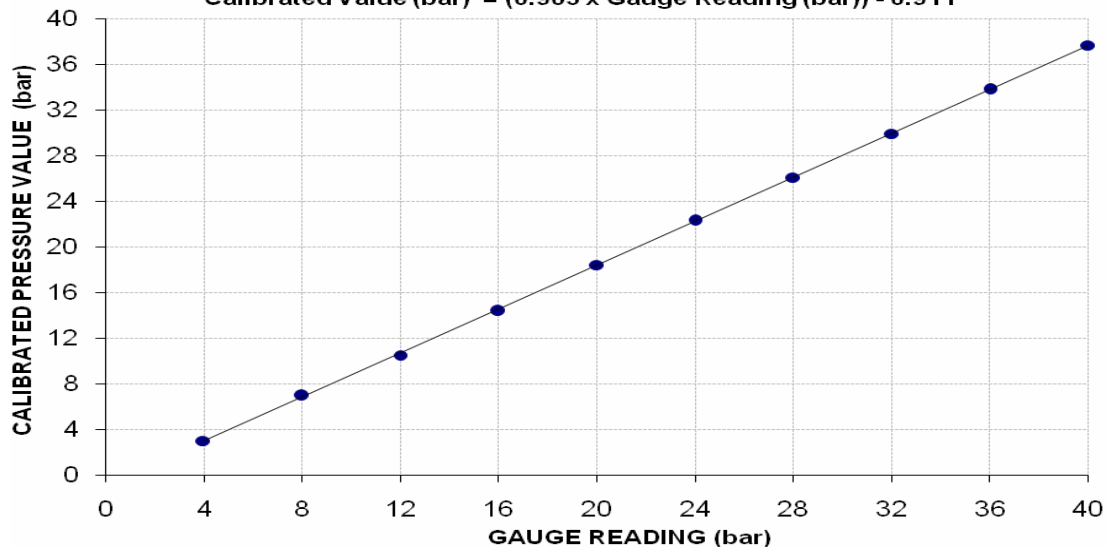
Total Range : Zero - 60 (bar)
Calibrated Range : Zero - 40 (bar)

Pressure Gauge Reading (bar)	4	8	12	16	20	24	28	32	36	40
Calibrated Load (kg)	600	1400	2120	2900	3720	4500	5260	6040	6820	7600
Calibrated Pressure (bar)	2.97	6.93	10.50	14.36	18.43	22.29	26.05	29.92	33.78	37.64

The Ram Area of Calibration = 198 cm²

Calibration Curve for Pressure Gauge

$$\text{Calibrated Value (bar)} = (0.963 \times \text{Gauge Reading (bar)}) - 0.911$$



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To,
 Resident Engineer
 ACE Limited, Sambrial Sialkot
 Establishment of University of Applied Engineering and Emerging Technologies (UAEET)
 Sambrial, Sialkot

Reference # CED/TFL **2273** (Dr. Rizwan Azam)
 Reference of the request letter # ER/UAEET/ACE/2022/83

Dated: 11-11-2022
 Dated: 11-11-2022

Tension Test Report (Page -1/1)

Date of Test 14-11-2022
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.366	3	0.370	0.11	0.108	3200	4500	64200	65530	90200	92200	1.30	16.3	FF Steel
2	0.363	3	0.368	0.11	0.107	3100	4400	62200	64100	88200	91000	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
 Resident Engineer
 NESPAK
 Remodelling of Mian Boulevard from Liberty Chowk to Kalma Chowk (CBD Square)

Reference # CED/TFL 2274 (Dr. Rizwan Azam)
 Reference of the request letter # 4500/13/AZL/05/01

Dated: 14-11-2022
 Dated: 10-11-2022

Tension Test Report (Page -1/1)

Date of Test 14-11-2022
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.371	3	0.373	0.11	0.109	3600	4900	72200	72740	98200	99100	1.00	12.5	Batala Premium Steel
2	0.366	3	0.370	0.11	0.108	3500	4900	70200	71750	98200	100500	1.10	13.8	
3	4.232	10	1.258	1.27	1.244	38400	54800	66700	68050	95200	97200	1.60	20.0	
4	4.137	10	1.244	1.27	1.216	38000	54800	66000	68880	95200	99400	1.50	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only four samples for tensile and two samples for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														
#10 Bar Bend Test Through 180° is Satisfactory														

Witness by Fahad Hussain (M.E. NESPAK) and Ishtiaq Ahmed (M.E. NLC)

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
 Resident Engineer
 NESPAK
 Dualization of Lilla Interchange (M-2) via P.D Khan to Jhelum I/C Bypass (2 Nos) Length
 km, District Jhelum

Reference # CED/TFL **2276** (Dr. Rizwan Azam)
 Reference of the request letter # NESPAK/RE/JH/22/233

Dated: 14-11-2022
 Dated: 12-11-2022

Tension Test Report (Page -1/1)

Date of Test 14-11-2022
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	5.302	11	1.409	1.56	1.558	44800	64600	63300	63360	91300	91400	1.80	22.5	Amreli Steel
2	5.353	11	1.415	1.56	1.573	45600	66000	64500	63880	93300	92500	1.80	22.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#11 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
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To,

M/S China Gezhouba Group Company Limited
Pakistan

Construction of Mohmand Dam Hydropower Project – Contract No. ICB MDHP-01, Construction of Civil Works Including Design, Supply and Installation of Electrical and Mechanical Works and Hydraulic Steel Structures.

Reference # CED/TFL **2278** (Dr. Safer Abbass)

Dated: 14-11-2022

Reference of the request letter # MDSYS-201

Dated: 12-11-2022

Tension Test Report (Page – 1/4)

Date of Test 14-11-2022

Gauge length 640 mm

Description Steel Strand Tensile Test as per ASTM A-416-94a

Sr. No.	Nominal Diameter	Nominal Weight	Measured weight	Yield strength clause (6.3)		Breaking strength clause (6.2)		Young's Modulus of Elasticity	% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)	E, GPa		
1	15.24 (0.6")	1102.0	1137.0	24300	238.38	27700	271.74	198	>3.50	11689
2	15.24 (0.6")	1102.0	1136.0	24100	236.42	27600	270.76	199	>3.50	11742
3	15.24 (0.6")	1102.0	1135.0	24000	235.44	27600	270.76	199	>3.50	11744
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	

Only Three Samples for Test

Witness by Qasim Siddique (QA QC Engineer CGGC)

Note:

1. Modulus of Elasticity is based on nominal steel area of the steel strand vide clause 13.3 of ASTM – A416a
2. Load versus percentage strain graphs are attached

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To,

M/S China Gezhouba Group Company Limited
Pakistan

Construction of Mohmand Dam Hydropower Project – Contract No. ICB MDHP-01, Construction of Civil Works Including Design, Supply and Installation of Electrical and Mechanical Works and Hydraulic Steel Structures.

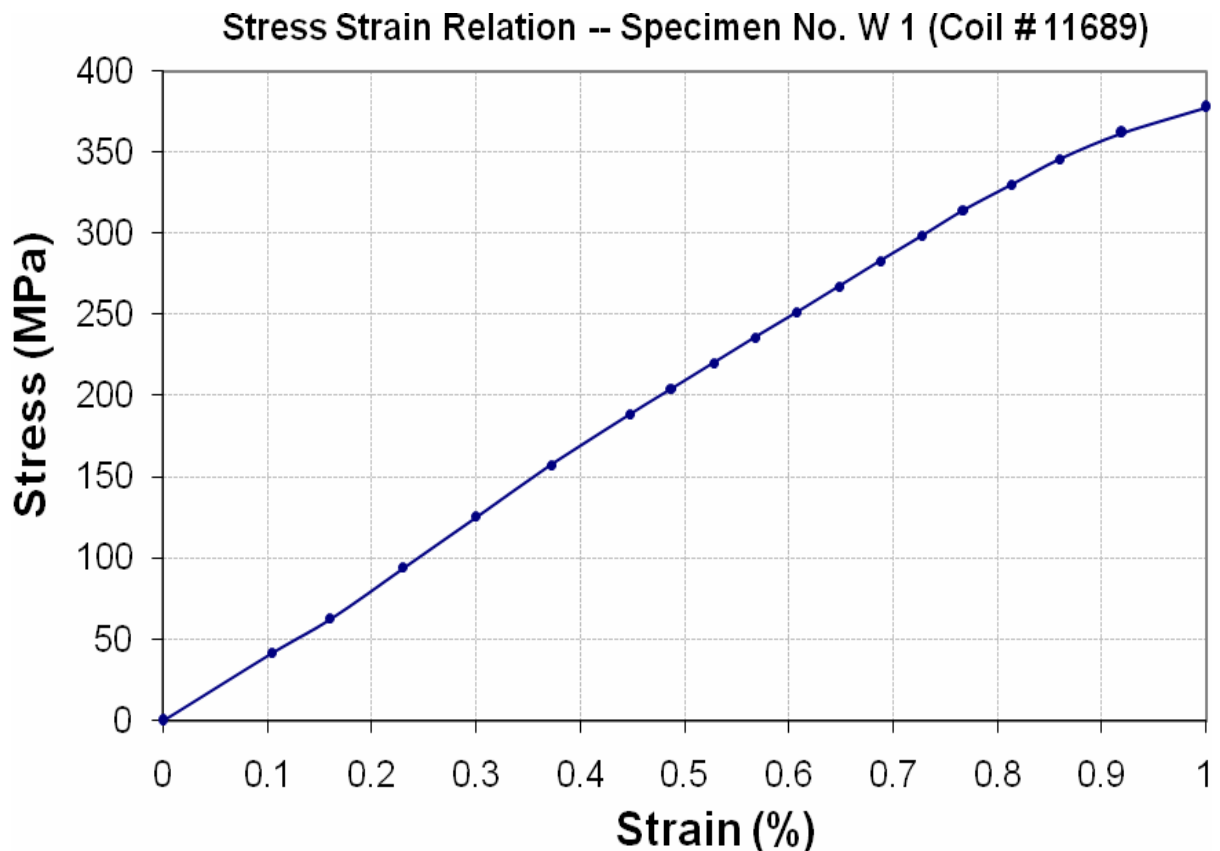
Reference # CED/TFL 2278 (Dr. Safeer Abbass)

Dated: 14-11-2022

Reference of the request letter # MDSYS-201

Dated: 12-11-2022

Graph (Page – 2/4)



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UET Lahore, Pakistan.

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Department of Civil Engineering
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To,

M/S China Gezhouba Group Company Limited
Pakistan

Construction of Mohmand Dam Hydropower Project – Contract No. ICB MDHP-01, Construction of Civil Works Including Design, Supply and Installation of Electrical and Mechanical Works and Hydraulic Steel Structures.

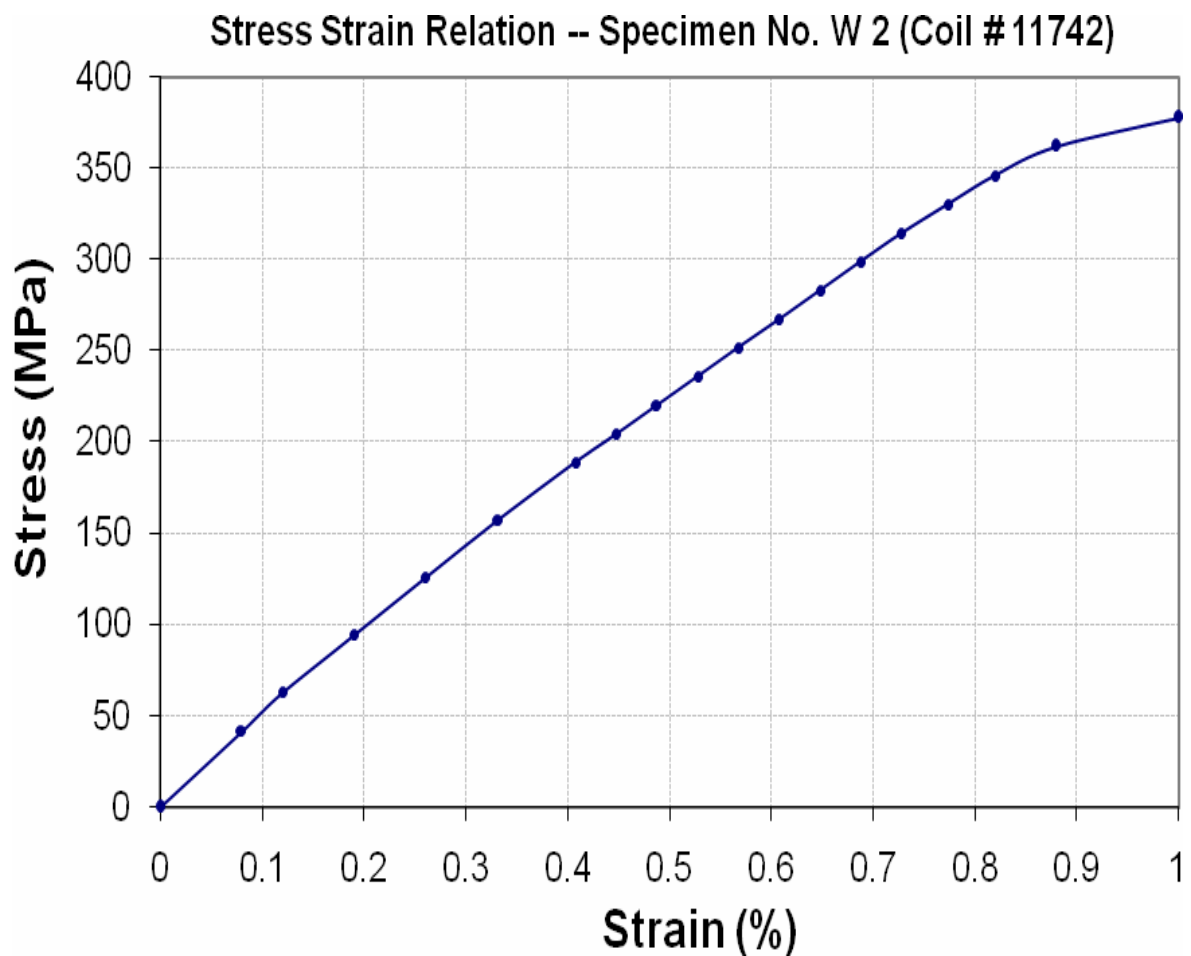
Reference # CED/TFL 2278 (Dr. Safer Abbass)

Dated: 14-11-2022

Reference of the request letter # MDSYS-201

Dated: 12-11-2022

Graph (Page – 3/4)



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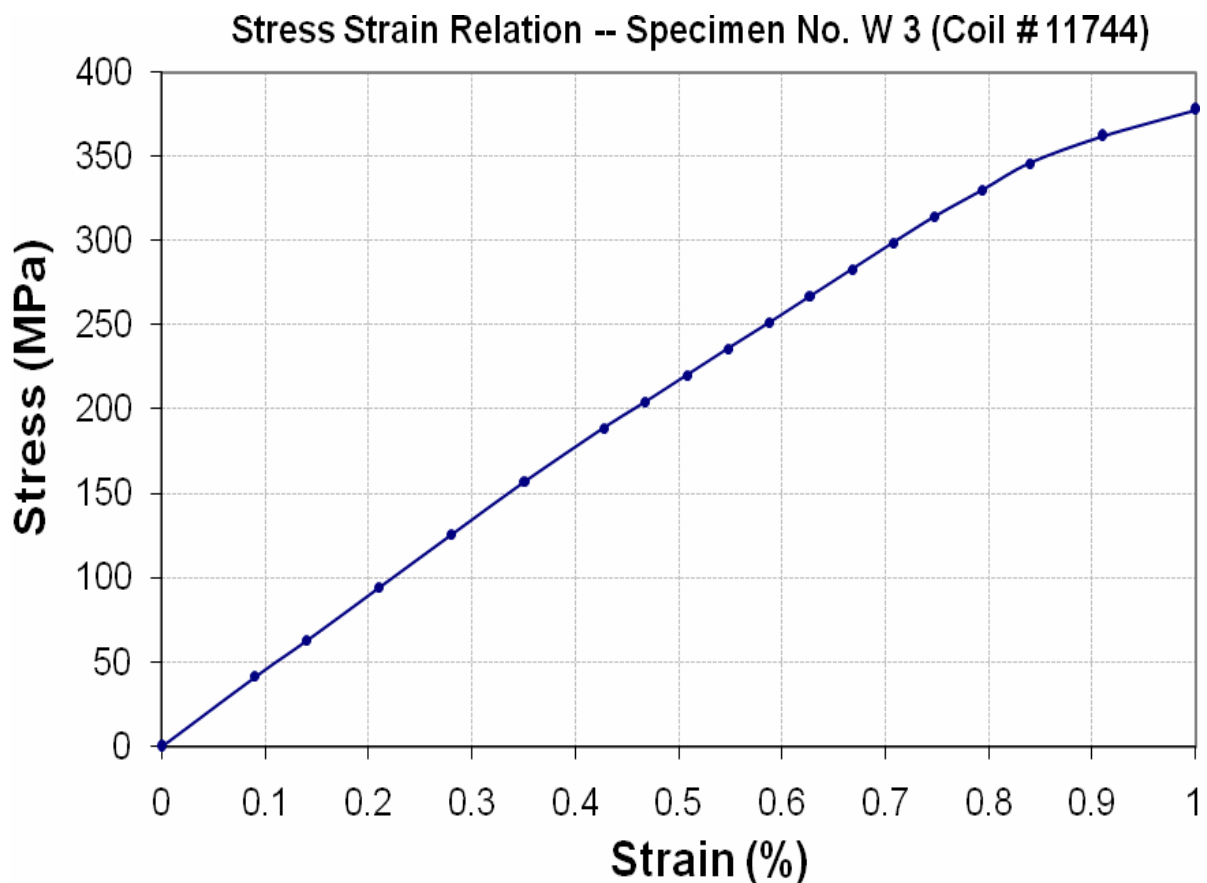
Reference # CED/TFL 2278 (Dr. Safer Abbass)

Dated: 14-11-2022

Reference of the request letter # MDSYS-201

Dated: 12-11-2022

Graph (Page – 4/4)



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To,
 Resident Engineer
 NESPAK
 Construction Supervision of Office Building for GEPCO Employees Housing Foundation
 (GEHF Town, Phase-1) Gujranwala

Reference # CED/TFL **2280** (Dr. Safer Abbass)
 Reference of the request letter # P4265/22/MA/134

Dated: 14-11-2022
 Dated: 12-11-2022

Tension Test Report (Page -1/1)

Date of Test 14-11-2022
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.371	3	0.373	0.11	0.109	3260	4810	65400	65870	96400	97200	1.40	17.5	Farooq Steel
2	0.361	3	0.367	0.11	0.106	3130	4640	62800	65090	93000	96500	1.50	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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